

objects, by far the greater number are limited to tropical seas. A notion seems to prevail that the floating species are also almost entirely natives of the warmer-temperate and tropical regions of the ocean, and that specimens picked up in northern regions are wanderers that have been carried beyond their proper range. It is desirable to ascertain to what extent this is the case.

Edinburgh, July 17, 1858.

XVIII.—*Descriptions of new Ceylon Coleoptera.*

By JOHN NIETNER, Colombo, Ceylon.

[Continued from vol. xx. Ser. 2. p. 375.]

Family CARABIDÆ.

Tribe TRIGONOTOMIDÆ.

THE Trigonotomidæ with an elliptic terminal joint of the palpi are abundantly represented amongst the Ceylon Carabidæ, thus making amends for the want of other tribes of the section to which they belong. I have now before me a great many individuals of different species which I have endeavoured to distribute into genera, after the works of Lacordaire, Dejean, and others of less importance. A single glance almost convinced me that they must belong either to *Abacetus*, *Distrigus*, or *Drimostoma*,—genera closely allied, and whose principal, in fact only essential, distinction would appear to consist in the shape of the mentum-tooth. If it is a well-established fact, as cannot be doubted from the above authors, that this tooth is *pointed* in *Drimostoma*,—*large, rounded, equalling the lateral lobes* in *Abacetus*, and *large and truncated* in *Distrigus*, the species described below could not, as to their genera, be distributed otherwise than I have done,—namely five to *Distrigus* and one to *Drimostoma*. The species which I have drawn to the former genus have a large, more or less square tooth, slightly rounded at the anterior angles. It is impossible to call this tooth *pointed* in any of the five species; they cannot therefore belong to the genus *Drimostoma*; nor can any of them be drawn to *Abacetus*, which genus is, moreover, apparently exclusively African. As to the insect which I have placed in the genus *Drimostoma*, its mentum-tooth is not exactly pointed, but it is altogether narrower than in *Distrigus*, and might well be called “*assez aigue*,” as Dejean describes it. This insect differs, moreover, very materially in general appearance, as well as in its details, from my *Distrigi*; and I feel sure that it belongs to the genus in which I have placed it, although it does not quite agree with Lacordaire’s

description, the labrum being emarginated in front, the second joint of the maxillary palpi exhibiting nothing unusual, &c. As to the species which I have established, I feel very certain that they are new and good ones, as it would appear, from the quotations in Lacordaire, 'Gen. des Col.,' that, since Dejean's descriptions, no new ones of Indian species have been published.

These insects live in the manner of the European Feronidæ, but appear to affect rather damp localities; some of them take freely to their wings, and fly commonly into houses in the evenings during the rainy weather.

58. *Distrigus costatus*, N.

D. nigerrimus, nitidus, subtilissime parce punctulatus, ore pedibusque piceis, tarsis antennisque castaneis, palpis brunneo-testaceis. Long. corp. $4\frac{3}{4}$ lin.

Capite, clypeo fronteque leviter excavatis, hac impressionibus 2 lateralibus semilunaribus profundissimis rugulisque nonnullis transversis; mandibulis fortiter sulcatis; menti dente magno excavato; thorace longitudine parum latiore, breviter obcordato, lateribus rotundato, basin versus angustato, basi truncato medio leviter emarginato, antice lateribus fortiter deflexo, dorso posticeque plano, basi longitudinaliter profunde 2-impresso, inter impressionibus leviter transversim rugoso, ad marginem ant. et post. obsolete sulcolato, dorso rugulis nonnullis transversis subtilibus, linea med. longitud. subtili extremis profundis diviso; elytris profunde striatis, interstitiis fere planis, puncto ad striam 2^m medio obsolete; *tarsis dorso fortiter 3-costatis*; prosterno plano.

Sub quisquiliis in ripis lacus Colombensis communis.

Apparently closely allied to *D. impressicollis*, Dej. However, if the description given in the 'Spec. Gen.' embraces all the characteristics of this latter species, mine is undoubtedly different from it. Dejean says nothing about the costæ on the back of the tarsi, which are the principal characteristic in my species; nor are such costæ of general occurrence or of so little importance that it could be supposed they had been left unnoticed by Dejean for these reasons. I cannot possibly call the thorax of my *D. costatus* "subquadrate;" it is rounded at the sides, narrowed behind, and cut away at the base. The striæ of the elytra of my species are not punctured in the bottom, as those of the *D. impressicollis* are stated to be. In mentioning the inter-antennal impressions, Dejean would certainly not have overlooked the depression in the centre of the forehead, nor that of the clypeus, which distinguish my insect, had they existed in the one he described. The former is round, the latter transverse. I further fail to discover in my species the "reflet un peu changeant" of the elytra, and that the base of the thorax is

“assez fortement ponctuée et que les points se confondent souvent ensemble ;” nor do I consider the interstices of the elytra “relevés, presque arrondis,” or the head “un peu rétrécie postérieurement ;” the head is of the same breadth from the antennæ to the occiput.

59. *Distrigus submetallicus*, N.

D. supra niger æneo-micans, nitidus ; subtus piceus, pedibus, ore antennisque obscure castaneis, tarsis brunneo-testaceis. Long. corp. 3 lin.

Capite præcedentis, sed fronte haud excavato ; mandibulis strigosis ; menti dente mediocri ; thorace breviter rotundato-obcordato, præcedente lateribus magis rotundato, antice magis deflexo, postice fortius quadrato, hic 3-impreso, impressione media lateralibus minus profunda ad apicem prolongata, inter impressionibus punctato longitudinaliterque ruguloso ; scutello excavato ; elytris striatis, ad striam 2^m ante medium utrinque puncto impreso, interstitiis deplanatis ; tarsis lævibus ; prosterno profunde canaliculato.

Ubi præcedentem specimen singulum m. cepi.

60. *Distrigus rufo-piceus*, N.

D. rufo-piceus, nitidus ; pedibus, thoracis elytrorumque margine testaceis, antennis brunneo-testaceis, mandibulis brunneis. Long. corp. 3 lin.

Capite inter antennis profunde longitud. 2-impreso, fronte medio leviter depresso, labro quadrato-rotundato, mandibulis infra medium sulcatis, menti dente mediocri, excavato, apice subrotundato ; thorace *D. costati*, sed parum brevior, basi 2-impreso, linea media longitud. fere obsoleta, rugulis nonnullis transversis subtilibus ; scutello, elytris pedibusque præcedentis, sed elytris puncto ad striam 2^m infra medium obsoleto ; prosterno leviter canaliculato.

In ripis lacus Colombensis specimen singulum legi.

61. *Distrigus æneus*, N.

D. supra æneus, subtus piceus, pedibus dilutioribus, antennis palpisque rufo-piceis. Long. corp. 2½–3 lin.

Capite ante oculos profunde oblique 2-sulcato, rugulisque nonnullis transversis, clypeo fronteque sæpius leviter depressis, mandibulis leviter sulcatis, menti dente mediocri ; thorace rotundato-obcordato, basi quadrate truncato, 3-impreso, impressione media minus profunda in lineam subtilem ad apicem prolongata, inter impressionibus profunde punctato, antice leviter strigoso, dorso subtiliter transversim ruguloso ; elytris striatis, ad striam 2^m medio distinctius puncto impreso ; prosterno sat fortiter canaliculato.

Prope Colombo in arenis subhumidis et nocte ad lumen communissimus.

62. *Distrigus Dejeani*, N.

D. piceo-niger, subtus sæpius rufo-piceus, nitidus, capite æneomicante, pedibus, elytrorum margine antennisque rufo-piceis, palpis testaceis. Long. corp. vix $2\frac{1}{2}$ lin.

Capite inter antennis 2-impresso, fronte leviter excavato, mandibulis subtiliter sulculatis, mento præcedentis; thorace robustiore, ut in præcedente sculpto et signato, sed antice non strigoso; elytris pedibusque præcedentis, illorum tamen puncto minus distincto; prosterno fere plano.

Cum præcedente communissime occurrit.

63. *Drimostoma Ceylanicum*, N.

D. nigro-piceum, nitidum, pedibus piceis, tarsis, antennis oreque dilutioribus, palpis testaceis. Long. corp. $2\frac{3}{4}$ –3 lin.

Capite ante oculos profunde 2-impresso, labro antice leviter emarginato, mandibulis elongatis, rectis, acutis, lævibus, menti dente sat acuminato, antennis art. 2–4 gradatim longioribus*; thorace obcordato, postice fortius angustato, quadrato, lævi, basi 2-impresso, linea longitud. med. diviso, antice impressione semilunari (impressionibus his omnibus profundioribus); elytris striatis, interstitiis parum elevatis; prosterno sat fortiter longitud. impresso.

In prov. occid. non frequenter occurrit.

64. *Casnonia punctata*, N.

C. supra subtusque (occipite abdomineque exceptis) dense profundeque punctata, brunneo-picea, elytrorum margine maculisque 2 apicalibus longitudinalibus cum margine confluentibus brunneo-testaceis, pedibus flavis, trochanteribus, geniculis tarsisque obscurioribus, ore dilute brunneo, antennarum art. 1^o palporumque art. 2^o basalibus flavis. Long. corp. 3 lin.

Specimina nonnulla mens. Decemb. prope Colombo nocte ad lumen cepi.

Smaller than the *Ophionia cyanocephala*. The head is robust, with two impressions between the antennæ, and a third just above them, somewhat of the shape of an inverted V. Occiput less narrowed than in *O. cyanocephala*, smooth. The anterior part of the head deeply punctured. The labrum is slightly produced in the middle. Thorax much plumper than in *O. cyanocephala*, hardly as long as the head, not much narrower, conic, considerably narrowed and cylindric at the base, densely and deeply punctured, especially at the base. Elytra with the shoulders straighter than in *O. cyanocephala*, impressed with rows of deep punctures growing smaller and shallower towards the apex, with a few small hairs near the

* In the *Distrigi* just described, joints 3 and 4 are subequal.

latter part; in the 3rd and 5th interstices three setigerous punctures, in the 3rd and 4th interstices a longitudinal apical macula, of yellowish colour, coalescent with the margin, which is of the same colour; two shallow impressions on either side, one below the shoulders, the other near the apex. Legs shorter than in *O. cyanocephala*.

65. *Casnonia pilifera*, N.

C. glaberrima, nitidissima (quasi lacca obducta), pilis longis sparsis vestita, nigra, ore (labro excepto) antennisque brunneis, his apicem versus dilutioribus, elytris maculis 2 subapicalibus argenteis, pedibus piceis, femoribus basi albis, trochanteribus obscurioribus, tibiis tarsisque brunnescentibus. Long. corp. $3\frac{2}{3}$ lin.

Specimina nonnulla cum præcedente cepi.

This elegant species is of the same size as the *O. cyanocephala*, but, with the exception of the elytra and abdomen, which are shorter and plumper, still more slender and graceful. Head large, very narrow and prolonged behind, much more so than in *O. cyanocephala*, with two large shallow impressions between the antennæ, and another small one just above them. Occiput slightly transversely rugose. Thorax very slender, half as broad as the head, of hardly the same length, obconic, constricted below the apex, then gradually increasing in size to below the middle; the base abruptly narrowed, cylindric, and impressed with three deep annuliform wrinkles. Elytra about as long as thorax and occiput together, increasing very sensibly in breadth to below the middle. The apex is much more obliquely cut away than in *O. cyanocephala* or the preceding species. The shoulders are full, and hide the margin; just below them the elytra are deeply excavated, showing, moreover, three deep longitudinal impressions in the bottom of either excavation, and a slight yellowish spot, hardly to be distinguished, at the outer part of it. A round spot of silvery appearance adorns the hind part of either elytron. There are two rows of long thin hairs, placed at considerable distances from each other, on the back of either elytron, and a third just within the margin; the same thin hairs are scattered about the thorax, femora, and elsewhere. The legs are longer and more slender than in *O. cyanocephala*.

The *Ophionia cyanocephala* is not scarce in this part of the island; it affects rather damp, grassy localities, where it mounts upon the stalks of the plants; this agrees with what Helfer has observed of some species in Bengal, but is quite different from the observations Lacordaire has made with regard to the American species of the genus. However, it is much more frequently taken about the light at night. The two species just described

are much scarcer. M. C. A. Dohrn of Stettin writes to me that he has received another species from me (*C. Cypris*, D.), which, however, I do not recollect; it would appear to be smaller than either of the former, black, with white tips to the antennæ.

Tribe FERONIDÆ.

Symphylus, n. g., N.

Corpus robustum, oblongo-ovatum, subdepressum. Caput mediocre postice haud angustatum, oculis mediocribus, sat prominulis, globosis. Mentum semicirculare, profunde emarginatum, dente forti spiniformi, lobis haud brevioribus, ligulæ connato (hinc n. g. *Symphylus*), profunde excavato. Ligula subcoriacea, invertè trigona, dorso elevato, paraglossis magnis connatis, eam sat longe superantibus, apice cylindricis. Palpi art. 4^o ovato, apice truncato; maxillares art. 3^o elongato. Labrum parvum, profunde angulate emarginatum. Mandibulæ validissimæ, subtrigonæ, porrectæ, una 1-, altera 2-dentata. Antennæ filiformes, humeros parum superante, art. 1^o mediocri, 2^o parvo, 3^o sequenti paulo minore, 4-11^o subæqualibus, 5-11^o depressis. Thorax subquadrato-cordatus, lateribus rotundatus, basi angustatus, quadratus, angulis posticis leviter oblique truncatis. Elytra ovata, parallela, apice rotundata et leviter utrinque sinuata. Pedes mediocres, tibiis ant. leviter dilatatis, profunde emarginatis; intermed. fortiter spinosis; tarsi art. 1^o cylindrico-trigono, 2^o et 3^o trigonis, 4^o obcordato, unguiculis simplicibus. (Mas latet.)

66. *Symphylus unicolor*, N.

S. niger, nitidus, glaber, pedibus oreque piceis. Long. corp. 8 $\frac{1}{4}$ lin.; lat. 3 lin.

Capite inter antennas 2-foveolato, mandibulis sulcatis; thorace antice haud, postice vix emarginato, hic 2-impresso, linea longitud. media diviso, ad marginem posteriorem longitud., dorso subtiliter transversim ruguloso; scutello leviter excavato; elytris striatis, in striis punctatis, interstitiis vix elevatis, cum thorace anguste marginatis.

Specimen singulum f. prope Colombo mens. Decembr. nocte ad lumen cepi.

This description is made after a single female individual; but I have little doubt that the insect belongs to the numerous tribe to which I have referred it, in which it ought perhaps to be placed near *Eccoptogenius*, Chaud. I am, however, not sure whether the shape of its ligula does not entitle it to a place amongst the *Anchonoderidæ*. I may add to the above description, that the accessory stria of the elytra is present, but that the puncture usually found upon the 3rd interstice is wanting. The general appearance of the insect presents nothing whatever particular; however, upon further inspection, the deeply notched labrum and the strong, porrected mandibles are very striking. The labium appears to me of extraordinary construction: the

mentum is large and of a semicircular shape, deeply emarginated, which renders the lobes heavy, rounded outside, and pointed at the tip. In the bottom of this emargination stands a pointed, spine-like tooth, as long as the lobes. This tooth is deeply excavated or grooved, and is clearly seen to be to its full length soldered together with the basal part of the ligula; probably the entire mentum is in this manner connected with the adjoining part of the ligula, but in the other parts it is not so clearly observable as in the tooth, and I have not dissected the labium. The ligula itself is of a leathery consistence, of the shape of an elongated inverted triangle with an elevated back; the anterior margin is straight, and somewhat prolonged beyond what would be the sides of the triangle. The paraglossæ are of membranaceous texture, very broad, adhering to the sides of the ligula to its full length, taking then a slender cylindric form, and reaching considerably beyond it, being at the same time slightly bent inwards.

Tribe HARPALIDÆ.

Calodromus, n. g., N.

Corpus robustum, ovatum, subconvexum. Caput mediocre, subquadratum, postice haud angustatum; oculis minoribus sat prominulis. Mentum profundius sublunate emarginatum, edentatum, lobis obtusis. Ligula oblonge quadrata, apicem versus dilatata, apice medio leviter producta, libera, paraglossis robustis eam parum superantibus, apice obtusis. Palpi art. 4^o elliptico, apice leviter truncato. Labrum subtransversum, antice emarginatum, angulis rotundatis. Mandibulæ validæ, una 1-, altera 2-dentata. Antennæ robustæ, thoracis basin attingentes, art. 1^o, 3^o, 11^o et 4-10^o inter se subæqualibus, 1-2^o cylindricis, 3^o basi angustato, 4-11^o ovatis, leviter depressis. Thorax transversus, lateribus leviter rotundatus, basi parum angustatus, quadratus, antice leviter emarginatus. Elytra thorace parum latiora, apice rotundata. Pedes robusti, ant. tibiis apice leviter dilatatis, profunde emarginatis, tarsis art. 1-4^o gradatim minoribus, 1^o subtrigono, 2-4^o transversim trigonis, unguiculis validis, simplicibus, *mas* art. 1-4^o leviter dilatatis, subtus squamulis 2-seriatim munitis; pedes intermed. et post. tibiis fortiter spinosis, tarsis simplicibus.

67. *Calodromus exornatus*, N.

C. glaber, nitidus, supra læte viridis, thoracis margine lato elytrumque fascia inframarginali testaceis, capite viridi-brunneo, antice brunneo, scutello cum sutura brunneis; subtus brunneus, pedibus testaceis. Long. corp. $4\frac{1}{3}$ - $4\frac{1}{2}$ lin.

Capite inter antennas 2-impresso, thorace capitis quarta parte longitudine, duplo latiore, basi 2-impresso, leviter rugoso-punctato,

linea longitud. media diviso, cum elytris anguste marginatis; his profunde striatis.

Specimina nonnulla mens. Nov. et Decemb. prope Colombo nocte ad lumen cepi.

Very pretty insects, apparently closely allied to the African genus *Bradybænus*, Dej., from which, however, they differ in the structure of the ligula and in other minor points. They are quite of the shape of a *Harpalus*, and I have no doubt that their habits are those of the latter. Joints 4-11 of the antennæ have very much the appearance of grains of rice strung together. The metallic green colour with which the insect is adorned on the back is very rich; on the elytra it forms a pattern of two triangles with their tips downwards, that of the upper one being immersed in the base of the lower one, and the apex of the latter being divided; these triangles are flanked on either side by a broad longitudinal belt of yellowish colour. The margin is again green, with the exception of the apex, which is occupied by the yellowish belt. The thorax is green in the centre and yellowish along the sides. The head is more or less brownish green, lighter in the middle; the mouth is brown.

68. *Zaphium pubescens*, N.

Z. rufo-testaceum, oculis nigris, occipite nigrescente, elytris pubescentibus fuscis maculis 2 subhumeralibus, et 1 apicali communi testaceis ornatis. Long. corp. $3\frac{3}{4}$ lin.

Antennis art. 1^o capitis vix longitudine; labro integro; palpis art. ultimo trigono; menti dente magno, obtuso, profunde canaliculato; thorace elongato-cordato, capitis latitudine, duplo longiore, medio leviter longitudinaliter depresso; elytris subtilissime dense pubescentibus, obsolete striato-impressis, humeris obsoletis.

Specimina nonnulla in prov. occid. nocte ad lumen cepi.

This description does not quite agree with Lacordaire's diagnosis of the genus *Zaphium*; the labrum and the tooth of the mentum are not what they ought to be according to this author. However, Schmidt-Goebel, in his 'Col. Birm.,' has already departed from Lacordaire's formula by describing six species of *Zaphium* with an entire mentum-tooth, which, according to the former author, would make them *Polystichi* rather. The fact is, that this part of the labium appears to be variable. In all other respects the insect agrees with Lacordaire's description of the genus.

The labrum is entire; the first antennal joint is hardly as long as the head, slightly curved, and increasing in thickness towards the tip; the second joint is very small and rounded, the rest are subequal, filiform; the tooth of the mentum is very

large, almost equalling the lobes, entire, and deeply grooved at the apex; the maxillary palpi are porrected; the second joint is as long as the two following together; the fourth, in both the maxillary and labial ones, is triangular or slightly securiform, being obliquely truncated at the tip; the thorax is elongated cordiform, truncated at the base; the back is elevated, divided down the middle by an impression; the commencement of the elevation forms two knobs at the base; the first tarsal joint is as long as the three following together.

[To be continued.]

XIX.—On a new species of *Lardizabala*, and on the Structure of the Seed in that genus. By JOHN MIERS, F.R.S., F.L.S. &c.

THE structure and affinities of the genera of the *Lardizabalaceæ* were scarcely known before the publication of the excellent monograph of M. Decaisne above twenty years ago, when the family was first established. Since that time little has been added to our knowledge of the order, except the interesting remarks of the authors of the 'Flora Indica,' who have described the Asiatic species, and have added a new and remarkable genus, which they have gracefully dedicated to the very eminent botanist before mentioned, the type being the *Decaisnea insignis*, a native of the Himalayas. M. Decaisne considered the family to be intermediate between *Schizandraceæ* and *Berberidaceæ*; and Prof. Lindley indicated its nearer affinity with the *Menispermaceæ*, at the head of which order it had long previously been placed as a distinct tribe by DeCandolle (*Lardizabaleæ*, Prodr. i. 95). In my memoir upon the *Winteraceæ* I have pointed out the intimate relationship existing between those two families.

It has been generally understood that the numerous ovules in the ovaries of the *Lardizabalaceæ* are scattered indiscriminately over the whole internal surface of the cell; but Drs. Hooker and Thomson show that in *Decaisnea* the ovules are confined to two regular lines of placentation, which they notice as an exceptional case, contrary to the condition which has been considered the chief characteristic of the order. In *Lardizabala*, a genus belonging exclusively to Chile, I have found that the ovules, in a similar manner, originate in six distinct parallel parietal placentæ, running from the base to the apex; and in the fruit, the seeds are likewise arranged in as many parietal lines. The distinguished botanists just mentioned also state that in *Decaisnea* the ripe fruit is filled with a cellular pulp, which is developed from the whole surface of the growing wall of the pericarp, thus forming a complete homogeneous mass, without leaving any